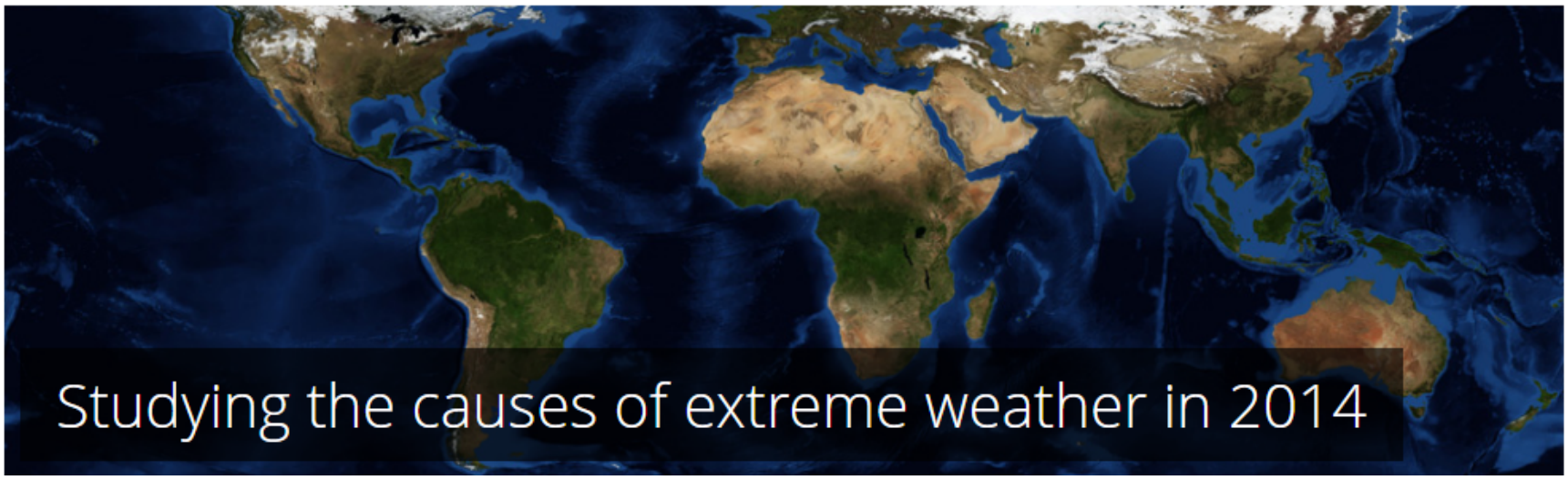

5 November 2015 - Met Office scientists have played a key role in compiling a report which studies the causes of dozens of extreme weather events around the world

The collection of research papers, which study the causes of dozens of extreme weather events around the world, reveal for example that human influence on the climate is likely to have contributed to the severe UK winter rainfall in 2013/14 in line with initial research done at the time.

The papers are released today in the *Explaining Extreme Events of 2014 From A Climate Perspective* report, which is part of a series published each year in the *Bulletin of the American Meteorological Society* (BAMS).

It is the biggest ever in terms of the number of events studied and the geographical area covered.

The Head of Climate Monitoring and Attribution at the Met Office Hadley Centre, Peter Stott, is one of the report's editors, and two of the research papers have Met Office authors.

The first shows a link between global warming and the exceptional UK rainfall of the winter 2013/14. It found that, under the same weather pattern (a persistent westerly flow), extreme rainfall over 10 consecutive winter days is now seven times more likely than in a world without man-made greenhouse gas emissions. This is in line with initial Met Office research which we published in February 2014.

The second paper concludes that manmade climate change has resulted in an 11 fold increase in the likelihood of very hot spring temperatures in Northern China, as seen in 2014.

Other papers from authors around the world study a range of events - with some concluding that the extreme weather was linked to human influence on the climate, while others conclude natural influence was the dominant factor.

Other Key research findings

Human influence was found to have increased the likelihood of;

- Heatwaves in Australia, Europe, Korea and China
- Heavy rainfall in Canada and New Zealand
- Tropical cyclones in Hawaii

Dr Peter Stott said; "Year on year this report provides a growing evidence base that human influence on the climate is changing the likelihood of some types of extreme weather around the world. It is important to remember natural variability is still an important factor in virtually all events and this research helps us better understand how the two interplay."

The number of event attribution studies within this annual report on extremes is steadily increasing as this area of research develops. Evidence, in the report, shows that manmade climate change has substantially increased the risk of certain types of weather and climate extremes.

Last updated: 5 November 2015